

Gaming console and system having dynamic feature gameIntroduction

The present invention relates to gaming consoles of the type known as slot machines arranged to play a large variety of card related and other gambling games such as keno or bingo, and in particular the invention provides an improvement to a game played on such a machine.

Description of the Prior Art

10 *Int a1* Gaming or poker machines have been well known in the state of New South Wales for many years and have more recently gained considerable popularity throughout Australia, with quite substantial amounts of money wagered on these machines. There is a growing tendency for State Governments to legalise the use of gaming machines by licensing operators, with resulting revenue gains through licence fees and taxation of monies  
15 invested. The licensed operation of gaming machines is the subject of State legislation and regulation. This regulation most always dictates a minimum percentage payout for a gaming machine. For example, a minimum of 85% of monies invested must be returned as winnings, and manufacturers of gaming machines therefore must design their machines around these regulatory  
20 controls.

With the growth that has occurred in the gaming machine market there is intense competition between manufacturers to supply the various existing and new venues. When selecting a supplier of gaming machines, the operator of a venue will often pay close attention to the popularity of various  
25 games with their patrons. Therefore, gaming machine manufacturers are keen to devise games which are popular with players, as a mechanism for improving sales.

Many various strategies have been tried in the past to make games more enticing to players, including the commonly known double-up feature, whereby, if a player wins a particular game, they can then risk the winnings  
30 of that game in a double-or-nothing mode in which they gamble on a subsequent, and often different, game such as whether a red or black card will be the next card drawn.

Other techniques adopted in the past have been to provide complexity  
35 in the numbering and combinations of indicia which would result in a win,

thereby hoping to convince the player that there is a greater chance of winning and to keep their interest in a particular game.

### **Summary of the Invention**

According to a first aspect the present invention provides a gaming console including a display means, and game control means arranged to control images displayed on the display means, the game control means being arranged to play a first game displayed on the display means and, if a winning combination results, the console pays a prize, the console being characterised in that the game control means includes a dynamic game feature whereby a feature game occurs upon a first trigger condition of the first game, and wherein a second trigger condition influences one or more gameplay aspects of the feature game such as to alter the likelihood of occurrence of at least one possible outcome of a set of possible outcomes of the feature game.

According to a second aspect the present invention provides a gaming console including a display means, and game control means arranged to control images displayed on the display means, the game control means being arranged to play a first game displayed on the display means and, if a winning combination results, the console pays a prize, the console being characterised in that the game control means includes a dynamic game feature whereby a feature game occurs upon a first trigger condition of the first game, and wherein a second trigger condition of the first game influences one or more gameplay aspects of the feature game such as to alter the likelihood of occurrence of at least one possible outcome of a set of possible outcomes of the feature game.

According to a third aspect the present invention provides a gaming system including at least one display means, and game control means arranged to control images displayed on each display means, the game control means being arranged to play a first game displayed on each display means and, if a winning combination results, the gaming system pays a prize, the gaming system being characterised in that the game control means includes a dynamic game feature whereby a feature game occurs upon a first trigger condition of the first game, and wherein a second trigger condition influences one or more gameplay aspects of the feature game such as to alter the likelihood of occurrence of at least one possible outcome of a set of possible outcomes of the feature game.

The first trigger condition may be the occurrence of a given symbol during the play of the first game, the occurrence of a given outcome of the first game, or the occurrence of a given event or sequence of events in the first game. Alternatively or additionally the first trigger condition may arise  
5 when a random number coincides with a number of credits bet per game, or may simply occur at random moments, or may be the occurrence of a player accumulation of a certain number of bonus points, or the first trigger condition may arise in a bonus game, the first game being the bonus game, which has come about during play on the console. The first trigger condition  
10 may come about in a different manner, as will be recognised by those skilled in the art. Similarly, the second trigger condition may be one or more of the above. The second trigger condition might even constitute a user selection of an aspect of the feature game, where the user selection could be made available upon the occurrence of the first trigger condition. In this instance,  
15 the user selection may be made on a display or screen or console separate to that of the first game.

The second trigger condition of the first game may influence one or more aspects of the feature game. For instance, the second trigger condition may increase the probability of the occurrence of a winning outcome of the  
20 feature game, or may increase or decrease the value of an available prize prior to or during play of the feature game. Other aspects of the feature game which the second trigger condition influences might be the number of winning opportunities in the feature game, the total number of possible outcomes of the feature game, or even the interaction of the feature game with other games. The second trigger condition may influence more than  
25 one or even all of the aspects of the feature game.

In other embodiments of the invention, there may be more than one type of first trigger condition and/or second trigger condition. In such embodiments, the type of first trigger condition which occurs may define the  
30 type of feature game which occurs. Similarly, the type of second trigger condition which occurs may alter the style of game played in the feature game, for instance by 'upgrading' the feature game to a different game in which there is a high likelihood of a winning outcome.

Preferably, the influence of the second trigger condition on the feature  
35 game is attractive to a user of the console or system, for example by being, or appearing to be, beneficial to the likelihood of a winning outcome. For

instance, the second trigger condition may increase a prize value and/or increase the probability of occurrence of a winning outcome of the feature game. However, the present invention also encompasses embodiments in which the second trigger condition influences the feature game in a manner which is, or appears to be, detrimental to the likelihood of a winning outcome. For instance, the second trigger condition may be the occurrence of either a 'bad' wild card in the first game or a 'good' wild card in the first game, wherein the occurrence of the 'bad' wild card causes a probability of occurrence of a winning outcome in the feature game to be reduced. The second trigger condition in such embodiments may also alter a prize value in the feature game or may influence other aspects of the feature game.

Additionally, the second trigger condition may occur a plurality of times during the play of the first game. In this circumstance each occurrence of a second trigger condition in the first game may influence an aspect of the feature game. For instance, each occurrence of the second trigger condition may increment a number of winning opportunities in the feature game and/or decrement a total number of outcomes of the feature game, thereby increasing the probability of a winning outcome occurring in the feature game. Alternatively or additionally, the first game may be played a plurality of times before an outcome of the feature game is determined. In such embodiments, each occurrence of the second trigger condition preferably has a cumulative or individual influence on one or more aspects of the feature game.

In embodiments of the invention the first game may be of a style which creates a matrix of symbols and pays prizes for the occurrence of predetermined combinations in the matrix. In such embodiments, an occurrence of a given symbol or symbols in certain positions of the matrix may constitute the first or second trigger condition. For instance, the first game may pay a prize for the occurrence of a winning combination along certain 'paylines' in the matrix, wherein the occurrence of a winning combination along a given payline may constitute the first or second trigger condition.

In some embodiments of the invention the feature game may take the form of a 'spinning wheel' divided into a number of sectors, some of the sectors indicating a prize, wherein the feature game involves a user activating the wheel, and, after a random amount of time the wheel stops,

whereby if a sector indicating a prize is situated adjacent to an indicator (which itself may be animated or fixed), the user wins the prize indicated by that sector. In such embodiments, the second trigger condition may increase the number of sectors indicating a prize, or may reduce the total number of sectors, alter the contents of one or more sectors, for instance adding a prize of certain value (such as \$5, \$10 . . \$100 etc) to a blank sector, or may even introduce a second or additional fixed or animated indicator. It is to be appreciated that the aspects of the feature game can be dynamic, and may change once, repeatedly, or even continuously. The indicator itself need not be fixed, and may move relative to the spinning wheel, in which case the wheel may remain motionless while the indicator moves. Alternatively the feature game may take the form of a board game, a game of dice, a bingo game, or a spinning reel game. It is to be appreciated that the first game and the feature game may be of a vast range of different styles.

#### **Brief Description of the Drawings**

Embodiments of the invention will now be described by way of example with reference to the accompanying drawings in which:

Figure 1 illustrates a gaming console with a video simulation of a rotating reel display incorporating a first embodiment of the invention;

Figure 2 is a schematic diagram of a gaming console control circuit;

Figure 3 shows a first game and a dynamic feature game;

Figure 4 illustrates a gaming system having a plurality of consoles;

Figure 5 is a flowchart illustrating the sequence of events of a second embodiment of the invention; and

Figure 6 is a flowchart illustrating the sequence of events of a third embodiment of the invention.

#### **Detailed Description of the Preferred Embodiments**

In the following detailed description the methodology of the embodiments will be described, and it is to be understood that it is within the capabilities of the non-inventive worker in the art to introduce the methodology on any standard microprocessor-based gaming machine by means of appropriate programming.

Referring to Figure 1 of the drawings, a first embodiment of the invention is illustrated in which a slot machine 10, of the type having a video

display screen 11 which displays a first game, in this instance including a plurality of rotatable reels 12 carrying symbols, is arranged to pay a prize on the occurrence of a predetermined symbol or combination of symbols.

In the slot machine 10 illustrated in Figure 1, the game is initiated by a push button 14, however, it will be recognised by persons skilled in the art that this operating mechanism might be replaced by a pull handle or other type of actuator in other embodiments of the invention. The top box 15 on top of the slot machine 10 carries an artwork panel which displays the various winning combinations for which a prize is paid on this machine.

The program which implements the game and game feature is run on a standard gaming machine control processor 20 as illustrated schematically in Figure 2. The processor 20 forms part of a controller 21 which drives the video display screen 22 of the console 24 and receives input signals from sensors 23. The sensors 23 may be touch sensors, a pull handle or another type of actuator in other embodiments of the invention. The controller 21 also receives input pulses from a mechanism 25 indicating the user has provided sufficient credit to begin playing. The mechanism 25 may be a coin input chute, a credit card reader, or other type of validation device. The controller 21 further drives a payout mechanism 26 which for example may be a coin output.

Figure 3 illustrates the video display screen 11 of Figure 1 in more detail. In accordance with the present invention a first game is being played in a window 30 displayed on the video display screen 11, in this case being of a style which creates a matrix 31 of symbols and pays prizes for the occurrence of predetermined combinations in the matrix 31. In this embodiment, an occurrence of the symbol 'K' in position 32 constitutes the first trigger condition, causing a feature game to occur, in window 40.

Although the feature game in the present embodiment appears on the same display means 11 as the first game, it is to be understood that the feature game may appear on a second display means of the console 10, or may even appear on a second console. Furthermore, embodiments of the invention may include a number of different first trigger conditions (for example, the occurrence of any one of a predetermined set of symbols in position 32), and the style of feature game occurring in window 40 may be dependent on which first trigger condition occurs.

The feature game shown in Figure 3 is of a 'spinning wheel' style, in which a wheel 41 having a plurality of sectors 42 is activated such that it appears to spin. After a random amount of time, the wheel comes to a stop, and, if the sector 42 adjacent to the indicator 43 contains a prize, the feature game awards that prize. Both the first game and the feature game may be thematic, for example the spinning wheel may be represented as a spinning chocolate wheel and the spinning reel game (the first game) in window 30 may have a theme of a card game, for example the symbols representing the cards.

In accordance with the present invention, the controller 21 (see Fig. 2) includes a dynamic game feature wherein aspects of the feature game shown in window 40 are influenced by a second trigger condition of the first game shown in window 30. In the present embodiment, the second trigger condition is the occurrence of a winning combination along payline 33 in the first game shown in window 30. When the second trigger condition occurs, that is when a winning combination occurs along payline 33 in the first game being played in window 30 under the control of controller 21, an aspect of the feature game being played in window 40 is influenced. In the present embodiment, each winning combination along payline 33 causes an additional prize to be placed in a sector 42 which previously did not contain any prize. Alternatively, each sector 42 may contain a prize having a certain value, and the occurrence of the second trigger condition may cause the prize value in one or more of the sectors 42 to increase. The play of the feature game displayed in window 40 may constitute 'spinning' the wheel 41 until a sector stops adjacent to the indicator, or alternatively the indicator may be set in motion about the wheel until it comes to a stop adjacent to a sector. If the sector situated adjacent to the indicator contains a prize, the player is awarded that prize. The following examples are given to assist in the understanding of the invention and are not intended to be limiting.

**Example 1:** A first trigger condition starts a feature game in window 40. During 10 consecutive games played in window 30, each occurrence of a symbol of, say, a \$100 note anywhere on column 34 of matrix 31 constitutes the second trigger condition, and has the effect of making one sector 42, out of say a possible 30 sectors, of the chocolate wheel 41 change from merely decorative form or from being a blank to a \$100 note. At the end of the 10 games played in window 30 the player presses a button to activate the wheel

41 which is now made up of sectors containing \$100 notes and sectors containing no prize. If the wheel stops with the indicator 43 indicating a sector 42 containing a \$100 note, the prize is awarded.

**Example 2:** A first trigger condition causes 20 consecutive games to be played in window 30, during which each occurrence of a bonus symbol, or of a second trigger condition giving entry into a 2nd screen, or another condition causing the game to access a central 'link progressive' jackpot, or a trigger condition which starts a bonus game series, etc; will make one segment of the chocolate wheel 41 change from a blank to the bonus symbol. At the completion of the 20 games the player presses a button to activate the wheel spin. If the wheel 41 stops with the indicator 43 indicating a sector 42 containing a bonus symbol the bonus event or prize is awarded.

**Example 3:** A first trigger condition causes 10 games to be played in window 30, during which each occurrence of a “wheel symbol” anywhere in column 34 constitutes the second trigger condition, which will decrement the number of blank segments, say 30, of the wheel 41. The wheel 41 might have 15 blank sectors and 15 sectors containing \$100 notes. After the 10 games are completed, the player presses a button to activate a random spin of the wheel 41, and if the wheel comes to stop with the indicator 43 indicating a sector 42 containing a \$100 note, the player wins \$100.

These examples could be implemented consecutively, or individually.

In the above described examples where blank or decorated sectors are changed to sectors which may provide a prize the player may be required to stake additional credit to effect that change, for example pay two credits to add a fifty credit prize to the wheel. Hence when the first trigger condition occurs the player will be taken to the feature screen where the second trigger condition will be the staking of additional credit by the player to build up the sectors of the wheel.

As shown in Fig 4 and in accordance with the second aspect of the invention, it is to be appreciated that the present invention may be implemented on a distributed gaming system 50, wherein a central gaming controller 51 controls display means 52 of a plurality of gaming consoles 53, or on other types of gaming systems.

Figure 5 is a flowchart illustrating the sequence of events of Example 2 of the invention, in which the first trigger condition arises during play of a base game, and the second trigger condition arises during play of a bonus



game. During play of the base game, a sequence of events follows flowchart elements 60, 61, 62, 63, 64, 65 and 66. A sequence of events during a bonus game further includes flowchart elements 67, 68, 69, 70 and 71.

In more detail, it can be seen that following a start condition 60, 5  
initialisation of variables occurs during process 61. Gameplay then awaits placement of a wager at decision 62. Upon placement of a wager, a gameplay process 63 occurs. As can be seen, until a first trigger condition causes the variable NUM\_GAMES to be set to a value of 20, the sequence of events of the base game will be caused by decision 65 to continue play of the base 10  
game, depending on placement of a wager as determined at decision 62.

Once a first trigger condition has occurred, the variable NUM\_GAMES is set to a value of 20 at process 66, and when the first trigger condition is met at 65, twenty bonus games will commence. If the second trigger condition has occurred, then decision element 67 causes the sequence of 15  
events to proceed to process 71, in which a prize is added to a blank segment of the feature wheel, thereby increasing the likelihood of a winning outcome when feature gameplay occurs at 70. Flowchart element 69 prevents gameplay of the feature game from occurring until 20 bonus games have been played, during which time each occurrence of a second trigger condition 20  
causes a prize to be added to a blank segment of the wheel.

Figure 6 is a flowchart illustrating the sequence of events in an additional embodiment of the invention, in which occurrence of both the first and second trigger conditions is determined during play of the base game (flowchart elements 80-87). As for the embodiment shown in Figure 5, 25  
following a start condition 80, initialisation of variables and/or gameplay elements occurs at process 81. Commencement of the base game is dependent on placement of a wager, as shown at decision 82. Following play of the base game at process 83, a determination is made as to whether either the first trigger condition and/or second trigger conditions have occurred. If 30  
the second trigger condition has been met then process 86 causes a prize to be added to the wheel, increasing the likelihood of a winning outcome, at least until there are no blank segments remaining (decision 85). Following occurrence of the first trigger condition, decision 87 causes gameplay of the feature game to occur at process 88, in which the odds of winning will have 35  
been influenced by the number of times the second trigger condition has occurred prior to feature game play.

As will be evident, in the embodiment shown in Figure 6, the second trigger condition may arise in either the base game or the bonus game.

Although the present invention has been described with reference to specific examples, it will be appreciated that it may be exemplified in other forms. For example, the idea of dynamically changing the segments of a wheel can also be applied to making up the segments of a board game. The elements of the board game, bonuses, etc will be awarded to a player as the result of landing on a position given the result of throwing dice (or a die) one or more times. Aspects of the feature game which may be influenced by the second trigger condition of the first game might include: the faces of a die or dice; the make up of a grid of squares such as bingo; the actual scorecard of a section of a game; or the make up of one or more spinning reels.

The feature game may be free or may be bought by the player in which case the player may be required to stake additional credit when playing the base in order to be eligible for the feature game. Typically the feature game will come about through chance, whether it is bought or free. Aspects of the feature game may be influenced by random events of the first game, user selections made in respect of the first game, random events occurring separately to the first game, or user selections made separately to the first game. The second trigger condition might even constitute a user selection of an aspect of the feature game, the user selection being made available upon the occurrence of the first trigger condition. In this instance, the user selection may be made on a display separate to the first game, for example in a separate display window, in which a player chooses say 10 out of 20 boxes to make up the feature game. The feature game could be any bonus game or series as are known in the art.

The feature game may commence immediately or may be conducted over a number of repetitions of the first game or may even be played at the player's discretion.

The first and/or second trigger conditions may occur in a basic game, or a separate bonus game.

It will be appreciated by persons skilled in the art that numerous variations and/or modifications may be made to the invention as shown in the specific embodiments without departing from the spirit or scope of the invention as broadly described. The present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive.